

REMARKS

Applicants respectfully request reconsideration of this application in view of the following remarks. For the Examiner's convenience and reference, Applicants' remarks are presented in substantially the same order in which the corresponding issues were raised in the Office Action.

Status of the Claims

Claims 1-47 are pending. Claims 1, 5, 6, 8, 9, 14-20, 22, 25, 27-31, 33, 35-39 and 41-45 are currently amended to more clearly define pre-existing claim limitations. Claims 34 and 40 are canceled without prejudice. No claims are added. No new matter has been added.

Summary of the Office Action

Claim 33 stands objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claims 5-9, 14-20, 22, 25, 27-31, 34 and 45 stand objected to because of various informalities.

Claims 1-11, 13, and 15 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as his invention.

Claims 1-33, and 40-47 stand rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Claims 34 and 40 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6678645 to Rajsuman et al. (hereinafter "Rajsuman") in view of U.S. Patent No. 6292765 to Ho et al. (hereinafter "Ho") and "objected-oriented" by Microsoft Computer Dictionary (MSCD).

Claims 35-39 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Objections

Claim 33 stands objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicants respectfully submit that claim 33 has been amended to more clearly define pre-existing claim limitations and to further limit the subject matter of a previous claim. Thus, Applicants submit that claim 33 is of proper dependent form under 37 CFR 1.75(c) and MPEP 2173.05(p), 2173.05(f), and 2113. It is respectfully requested that the objection to claim 33 be withdrawn.

Claims 5-9, 14-20, 22, 25, 27-31, 34, and 45 stand objected to because of informalities. Applicants respectfully submit that claims 5-9, 14-20, 22, 25, 27-31, 34, and 45 are currently in condition for allowance.

Claims 5 and 6 stand objected to because of informalities. In particular, the Office Action states that “‘the software programming interface’ is understood to refer to ‘the programming interface’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that claims 5 and 6 have been amended to refer to “the programming interface”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claims 5 and 6 be withdrawn.

Claim 7 stands objected to because of informalities. In particular, the Office Action states that “‘component to create’ is understood to refer to ‘component creates’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that “component to create” is proper usage of the passive voice and is acceptable for use in an apparatus claim. Applicants refer to the court case IPLX Holdings vs Amazon (Fed Cir.) decided Nov. 2005 in which the Federal Circuit declared recited system limitations attempting to be a method claim at the same time are indefinite under 112 because it would be unclear if a user of the apparatus or a manufacturer of the apparatus would be the direct infringer of that claim. Thus, applicants make it clear that the device itself is protected by this claim. Applicants note under 35 USC 271, whether a potential infringer uses, makes, sells, offers to sell, or imports the claimed device [or does all four activities] that entity would still be a direct infringer and thus the Federal circuits reasoning in practicality makes little sense. However, to better clarify that the device itself is being protected applicants choose to use passive voice in the apparatus claim. Accordingly, Applicants

respectfully submit that claim 7 is patentable and request that the objection to claim 7 be withdrawn.

Claim 8 stands objected to because of informalities. In particular, the Office Action states that “‘the particular’ is understood to refer to ‘a particular’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that claim 8 has been amended to refer to “a particular data type”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 8 be withdrawn.

Claim 9 stands objected to because of informalities. In particular, the Office Action states that “‘the particular data’ is understood to refer to ‘the particular data type’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that claim 9 has been amended to refer to “a particular data” rather than “the particular data”. Applicants respectfully submit that claim 9, as amended, contains proper antecedent basis. Thus “the particular data” should not be understood to refer to “the particular data type”. Accordingly, Applicants request that the objection to claim 9 be withdrawn.

Claims 14-19, 22, 25, and 28 have been objected to because of informalities. In particular, the Office Action states that “‘the monitor components’ is understood to refer to ‘the one or more interconnect monitor components’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that claims 14-19, 22, 25, and 28 have been amended to refer to “the one or more interconnect monitor components”, as suggested by the Office Action, or “the first interconnect monitor component” where the singular form is appropriate. Accordingly, Applicants request that the objection to claims 14-19, 22, 25, and 28 be withdrawn.

Claim 15 has been objected to because of informalities. In particular, the Office Action states that “‘calls’ is understood to refer to ‘call’, ‘the code’ is understood to refer to ‘code’, ‘the simulation run’ is understood to refer to ‘a simulation run’, ‘a simulation run’ is understood to refer to ‘the simulation run’.” Office Action, 06/07/06, page 2. Applicants respectfully submit that claim 15 has been amended to refer to “to call”, “code”, “a simulation run” and “the simulation run”. As discussed above, Applicants respectfully submit that “to call” is proper usage of the passive voice and is acceptable for use in an apparatus claim. Thus “calls” should not be understood to refer to “call”.

Accordingly, Applicants respectfully submit that claim 15 is patentable and request that the objection to claim 15 be withdrawn.

Claim 16 has been objected to because of informalities. In particular, the Office Action states that “‘the code’ is understood to refer to ‘code’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 16 has been amended to refer to “code”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 16 be withdrawn.

Claim 17 has been objected to because of informalities. In particular, the Office Action states that “‘supplies’ is understood to refer to ‘supply’, ‘the two or more checker components’ is understood to refer to ‘the two or more checker components to verify an interconnect protocol’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 17 has been amended to refer to “to supply” and “the two or more checker components to verify an interconnect protocol”. Applicants respectfully submit that “to supply” is proper usage of the passive voice and is acceptable for use in an apparatus claim. Thus “supplies” should not be understood to refer to “supply”. Accordingly, Applicants respectfully submit that claim 17 is patentable and request that the objection to claim 17 be withdrawn.

Claim 20 has been objected to because of informalities. In particular, the Office Action states that “‘the programming interface’ is understood to refer to ‘the software programming interface’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 20 has been amended to refer to “the software programming interface”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 20 be withdrawn.

Claim 22 has been objected to because of informalities. In particular, the Office Action states that “‘supplies’ is understood to refer to ‘supply’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 22 has been amended to refer to “to supply”. Applicants respectfully submit that “to supply” is proper usage of the passive voice and is acceptable for use in an apparatus claim. Thus “supplies” should not be understood to refer to “supply”. Accordingly, Applicants request that the objection to claim 22 be withdrawn.

Claim 27 has been objected to because of informalities. In particular, the Office Action states that “‘the software monitor component’ is understood to refer to ‘the one or more interconnect monitor components’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 27 has been amended to refer to “a first interconnect monitor component”. Applicants respectfully submit that claim 27, as amended, contains proper antecedent basis. Thus “the software monitor component’ should not be understood to refer to “the one or more interconnect monitor components”. Accordingly, Applicants request that the objection to claim 27 be withdrawn.

Claim 29 has been objected to because of informalities. In particular, the Office Action states that “‘the programming [*sic*] interface component’ is understood to refer to ‘the software programming interface’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 29 has been amended to refer to “the software programming interface”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 29 be withdrawn.

Claim 30 has been objected to because of informalities. In particular, the Office Action states that “‘the functional checker component’ is understood to refer to ‘the one or more functional checker components’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 30 has been amended to refer to “a first functional checker component”. Applicants respectfully submit that claim 30, as amended, contains proper antecedent basis. Thus “the functional checker component” should not be understood to refer to “the one or more functional checker components”. Accordingly, Applicants request that the objection to claim 30 be withdrawn.

Claim 31 has been objected to because of informalities. In particular, the Office Action states that “‘all of the hardware’ is understood to refer to ‘all hardware’, ‘that connection’ is understood to refer to ‘that interconnection’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 31 has been amended to refer to “all hardware” and “that interconnection”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 31 be withdrawn.

Claim 34 has been canceled without prejudice but the examiners comments have been reflected in claims 35 and 38.

Claim 45 has been objected to because of informalities. In particular, the Office Action states that “‘the monitor component’ is understood to refer to ‘the interconnect monitor component’.” Office Action, 06/07/06, page 3. Applicants respectfully submit that claim 45 has been amended to refer to “the interconnect monitor component”, as suggested by the Office Action. Accordingly, Applicants request that the objection to claim 45 be withdrawn.

Response to Rejections under 35 U.S.C. § 112, second paragraph

The Office Action rejected claims 1-11, 13, and 15 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully assert that claim 1, as amended, satisfies the structural and definiteness requirements of 35 U.S.C. § 112, second paragraph.

Claim 1, as amended, states in part:

An apparatus, comprising:

a computer readable medium storing code for a functional checker component for an Intellectual Property (IP) core, a protocol checker component, an interconnect monitor component, and a programming interface,

wherein the code, which when executed by a computing device, to cause the programming interface to connect the functional checker component and the protocol checker component to the interconnect monitor component, wherein the interconnect monitor component having code to build data structures containing protocol data types requested by a first checker component and code specifying where to deliver data based upon a particular type of data requested by the first checker component....
(Emphasis added)

The Manual of Patent Examining Procedure (M.P.E.P.) § 2106 outlines statutory claim language for software related inventions. In some of the relevant sections, M.P.E.P. § 2106 states:

The claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and tangible result.” *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F. 3d 1368, 1373, (Fed. Cir. 1998).

patentable subject matter [in] the claims [is] defined [as] “a specific machine to produce a useful, concrete, and tangible result.” *In re Alappat*, 33 F.3d 1526, 1544, (Fed. Cir. 1994).

Office personnel should begin their evaluation of a computer-related invention as follows:

- determine what the programmed computer does when it performs the processes dictated by the software. (M.P.E.P. § 2106 Patentable Subject Matter - Computer-Related Inventions)

Applicants submit that claim 1, as it currently stands, satisfies the 35 U.S.C. § 112 requirements for patentability. The application claim language states roughly, “a computer readable medium storing code... which when executed by a computing device, to cause a machine or structure (i.e. **programming interface**) to produce [a useful result].” Therefore, claim 1 captures both “a specific machine to produce a useful, concrete, and tangible result” and “what the programmed computer does when it performs the processes dictated by the software.” Thus, Applicants respectfully submit that claim 1 is patentable under 35 U.S.C. § 112 and the guidelines set out in MPEP 2106. Accordingly, Applicants request that the rejection of claim 1 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Given that claims 2-11, and 13 depend from independent claim 1, which is patentable, Applicants respectfully submit that dependent claims 2-11, and 13 are also patentable. Accordingly, Applicants request that the rejection of claims 2-11 and 13 under 35 U.S.C. § 112, second paragraph, be withdrawn.

In regards to claim 15, Applicants respectfully submit that claim 15, as amended, satisfies the structural and definiteness requirements of 35 U.S.C. § 112, second paragraph.

Claim 15, as amended, states:

The apparatus of claim 14, wherein a first interconnect monitor component to call a method defined in code of **a first checker component** as data becomes available during a simulation run to allow an error to be detected during the simulation run.

(Emphasis added)

Applicants submit that claim 15 has been amended to refer to “a first checker component.” Applicants respectfully submit that claim 15 contains proper antecedent basis, that any ambiguity in claim 15 has been clarified and that claim 15 particularly

points out and distinctly claims the subject matter, which Applicants regard as the invention. Thus, claim 15, as amended, satisfies the requirements of 35 U.S.C. § 112, second paragraph. Therefore, Applicants respectfully request that the rejection of claim 15 under 35 U.S.C. § 112, second paragraph, be withdrawn.

Response to Rejections under 35 U.S.C. § 101

The Office Action rejected claims 1-33, and 40-47 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully assert that claim 1-33, and 41-47, as amended satisfy the requirements of 35 U.S.C. § 101. Claim 40 has been canceled without prejudice.

CLAIMS 1-13

Claim 1 stands rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. In support of the rejection, the Office Action states in part:

Since neither the components nor the interface are claimed in combination with the necessary hardware to enable their functionality, the claim is to an abstract idea rather than a practical application idea, since no physical transformation nor useful, concrete and tangible result would be able to be realized from the idea of what is claimed.

Office Action, 06/07/06, pages 4-5.

Applicants respectfully disagree with the Office Action's characterization of the claim as it stood but now claim 1 as amended is clearly patentable subject matter. As discussed somewhat above, Applicants respectfully submit that claim 1 illustrates actual structure and functionality that leads to a useful, concrete, and tangible result. "The claimed invention as a whole must accomplish a practical application. That is, it must produce a 'useful, concrete and tangible result.'" M.P.E.P. § 2106. "Functional descriptive material consisting of data structures and computer programs, which impart functionality when employed as a computer component" are patentable under 35 USC 101. M.P.E.P. § 2106 B(1) Applicants submit that claim 1, as it currently stands, satisfies the 35 U.S.C. § 112 requirements for patentability. The application claim language roughly states, "a computer readable medium storing code... which when executed by a computing device, to cause a machine or structure (i.e. **programming**

interface) to produce [a useful result]. Thus, Applicants respectfully submit that claim 1 is patentable under 35 U.S.C. § 101. Accordingly Applicants request that the rejection of claim 1 under 35 U.S.C. §101, be withdrawn.

Given that claims 2- 13 depend from independent claim 1, which is patentable, Applicants respectfully submit that dependent claims 2- 13 are also patentable. Accordingly, Applicants request that the rejection of claims 2-13 under 35 U.S.C. § 101, be withdrawn.

CLAIM 12

Claim 12 stands rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully submit that claim 12 satisfies the requirements of 35 U.S.C. § 101.

In support of the rejection, the Office Action states in part:

Even if the limitations of claim 1 are now all embodied on such a medium, Applicant has specifically disclosed that such a medium may not be limited to storage mediums, but also includes transmission mediums.
Office Action, 06/07/06, page 5.

Applicants submit that the specification has been amended to distinguish between machine readable mediums as storage and transmission mediums, as suggested by the Office Action. As described in the specification, “a machine-readable medium includes any storage mechanism that provides information in a form readable by a machine [and eliminated transmission mediums].” Specification, [0050] page 23. Thus, Applicants respectfully submit that claim 12 satisfies the requirements for patentability of 35 U.S.C. § 101. Accordingly, Applicants respectfully request that the rejection of claim 12 under 35 U.S.C. § 101 be withdrawn.

CLAIMS 14-33, 45-47

Claims 14-33 and 45-47 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully submit that based on the amendments to the specification and the previous 101 arguments discussed above, claims 14-33 and 45-47 satisfy the requirements for patentability of 35 U.S.C. §

101. Accordingly, Applicants respectfully request that the rejection of claims 14-33 and 45-47 under 35 U.S.C. § 101 be withdrawn.

CLAIMS 40-44

Claims 40-44 stand rejected under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Applicants respectfully submit that based on the amendments to the specification and the reasons discussed above, claims 41-44 satisfy the requirements for patentability of 35 U.S.C. § 101. Accordingly, Applicants respectfully request that the rejection of claims 41-44 under 35 U.S.C. § 101 be withdrawn. Claim 40 has been canceled without prejudice.

Response to Rejections under 35 U.S.C. § 103(a)

The Office Action rejected claims 34 and 40 under 35 U.S.C. § 103(a) as being unpatentable over Rajsuman in view of Ho. Claims 34 and 40 have been canceled without prejudice.

Response to Objections

Claims 35-39 stand objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that claims 35 and 38 have been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that claims 35 and 38 are patentable and respectfully request that the objection to claims 35 and 38 be withdrawn. Given that claims 36, 37, and 39 depend from independent claims 35 and 38, Applicants submit that claims 36, 37, and 39 are also patentable and respectfully request that the objection to claims 36, 37, and 39 be withdrawn.

Claims 41-44 stand objected to as being dependent upon a rejected base claim but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that claim 41 has been rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants respectfully submit that claim 41 is patentable and

respectfully request that the objection to claim 41 be withdrawn. Given that claims 42-44 depend from independent claim 41, Applicants submit that claims 42-44 are also patentable and respectfully request that the objection to claims 42-44 be withdrawn.

CONCLUSION

It is respectfully submitted that in view of the amendments and remarks set forth herein, the rejections have been overcome. If there are any additional charges, please charge them to our Deposit Account No. 02-2666. Furthermore, if an extension is required, then Applicants hereby request such an extension.

Respectfully submitted,
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